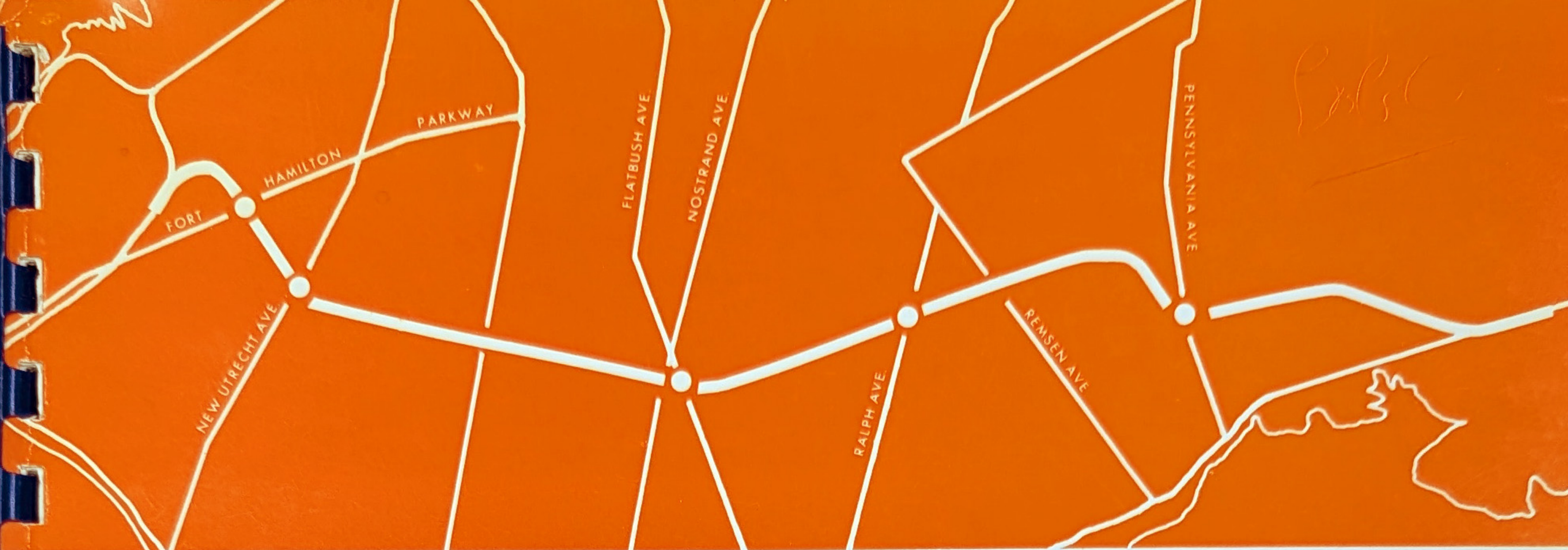




BENEFITS FOR BROOKLYN **CROSS**
BROOKLYN
EXPRESSWAY

BRILL ENGINEERING CORPORATION NEW YORK, N.Y.

BRILL ENGINEERING CORPORATION ■ NEW YORK, NEW YORK

January 18, 1967

Honorable Harry J. Donnelly, Commissioner
Department of Highways
The City of New York
40 Worth Street
New York, New York 10013

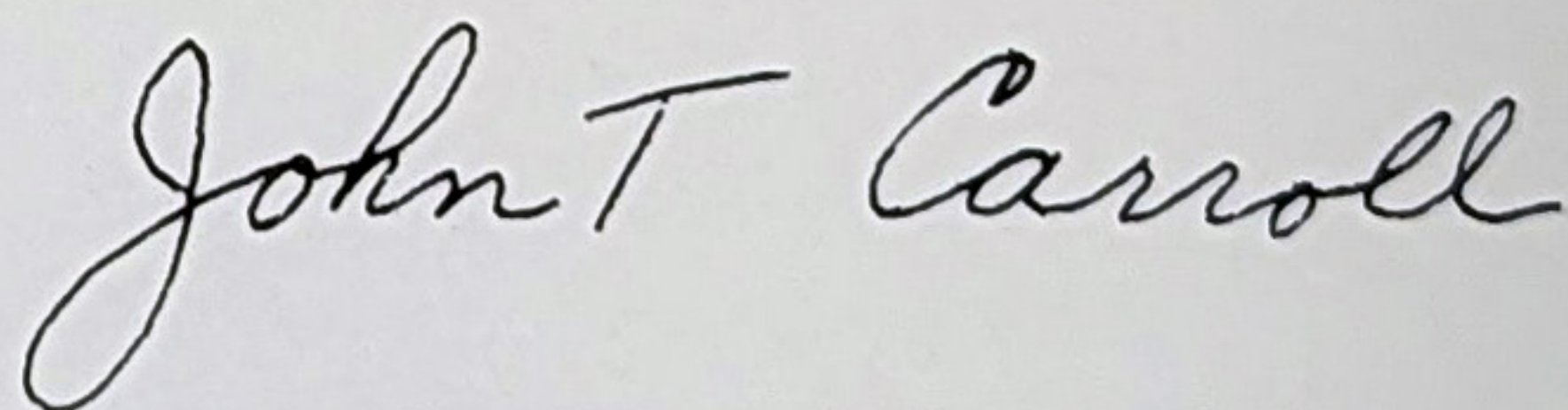
Dear Commissioner:

In accordance with your request of December 28, 1966, we have prepared a brochure summarizing our brief review of the available engineering studies and data regarding the feasibility of the Cross-Brooklyn Expressway, with emphasis on the problem of minimizing dislocation of residents and disruption of neighborhoods.

The improvement to traffic flow and the many other benefits, accruing to the Borough of Brooklyn in particular, and to the City of New York in general, appear to be enormous when compared to the relatively slight amount of dislocation and disruption caused by its construction.

From all aspects of improved urban living mentioned in our summary this project should be given top priority in the New York City program of improvements.

Sincerely yours,



John T. Carroll, P.E.
President

JTC:pb

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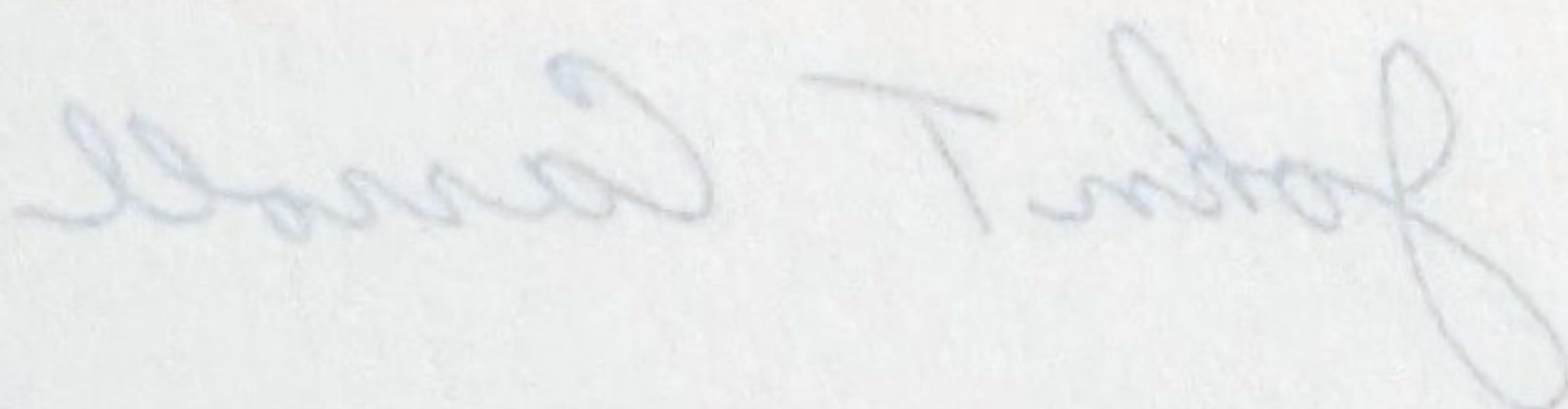
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JTC:pb

CROSS BROOKLYN EXPRESSWAY

A Limited-Access State-Federal-Aided Highway
with Multiple Benefits for the
Residents of Brooklyn and the City of New York

DEPARTMENT OF HIGHWAYS
NEW YORK CITY

JANUARY 1967

BRILL ENGINEERING CORPORATION
New York, New York

The City of New York

John V. Lindsay - Mayor

Arthur E. Palmer, Jr. - Transportation Administrator

Department of Highways

Harry J. Donnelly - Commissioner

Henry Levinson P.E. - Deputy Commissioner

Edward J. Moloney P.E. - Director of Engineering

SUMMARY... There is a general consensus of opinion among those concerned with New York highway programs that the Cross-Brooklyn Expressway should be a top-priority highway resulting in exceptional benefits for the Borough of Brooklyn and the City of New York.

The highway would provide the interior of Brooklyn with access to the existing city and national arterial highway system. It would allow Brooklyn residents more easily to avail themselves of the recreational and cultural facilities of their borough and city. Existing and potential industry would benefit from a modern highway to service their transportation needs. Commercial traffic would be provided with its first expressway through Brooklyn, taking their vehicles off local streets, thereby increasing safety and reducing air pollution and noise. The Shore Parkway would be relieved and the southern bypass of New York City's central business areas would be completed.

The alignment being considered has the advantage of utilizing the existing Long Island Railroad (Bay Ridge Division) right-of-way, thereby minimizing private land acquisition requirements and adverse neighborhood impact. The existing railroad cut and the blighted areas east of Van Sinderen Avenue would be improved by the construction of a modern landscaped highway. Modern highway access and beautification would increase the land values of adjoining neighborhoods.

Air-rights developments in the section between New Utrecht and Nostrand Avenues must be considered as a definite future probability. Acquisition of the railroad right-of-way for highway purposes would provide New York City with the valuable asset of air rights. The city would be in the position of determining and controlling the pattern and usage of this development for the overall benefit of Brooklyn residents.

The Route Selection Study prepared for the Triborough Bridge and Tunnel Authority has been reviewed with the view of decreasing the disruption to the existing residential neighborhoods.

Our review indicates that a revision to the roadways between Fort Hamilton Avenue and Nostrand Avenue could result in over a 60 percent decrease in the number of family units dislocated in their section (see table on next page.)

This revised roadway arrangement calls for a two-level roadway and deserves an in-depth study because of its pronounced beneficial effect on decreasing the impact on residential neighborhoods.

Our review also reveals that, with minor revisions, provisions can be presently made for a future high-speed rapid transit link from the John F. Kennedy Airport to Manhattan, utilizing the Cross-Brooklyn Expressway right-of-way to Van Sinderen Avenue. The link could then proceed northward along the seldom used Long Island Railroad connecting line toward Manhattan.

The studies to minimize land acquisition and provide for integrating rapid-transit facilities with highway construction should be initiated as soon as possible as a preliminary step toward the construction of the Cross-Brooklyn Expressway.

Based on these factors, we concur with the position taken by city agencies, including the City Planning Commission, the New York City Department of Highways, the Department of Traffic, the Brooklyn Chamber of Commerce and other civic groups that the Cross-Brooklyn Expressway is a "top priority" project which should be started immediately.

The immediacy is important both to relieve conditions that are becoming increasingly intolerable and to construct the expressway within the Federal Aid (90-10) Interstate Program, which is scheduled to be completed in 1973.

SECTION	1	2	3	4	1 to 4
Section Limits	Gowanus Expwy to Ft. Hamilton Pkwy	Ft. Hamilton Pkwy to Albany Ave	Albany Ave. to Van Sinderen Ave	Van Sinderen Ave. to Nassau Expwy	Gowanus Expwy to Nassau Expwy
Length	0.9 Miles	3.8 Miles	2.6 Miles	4.1 Miles	11.4 Miles

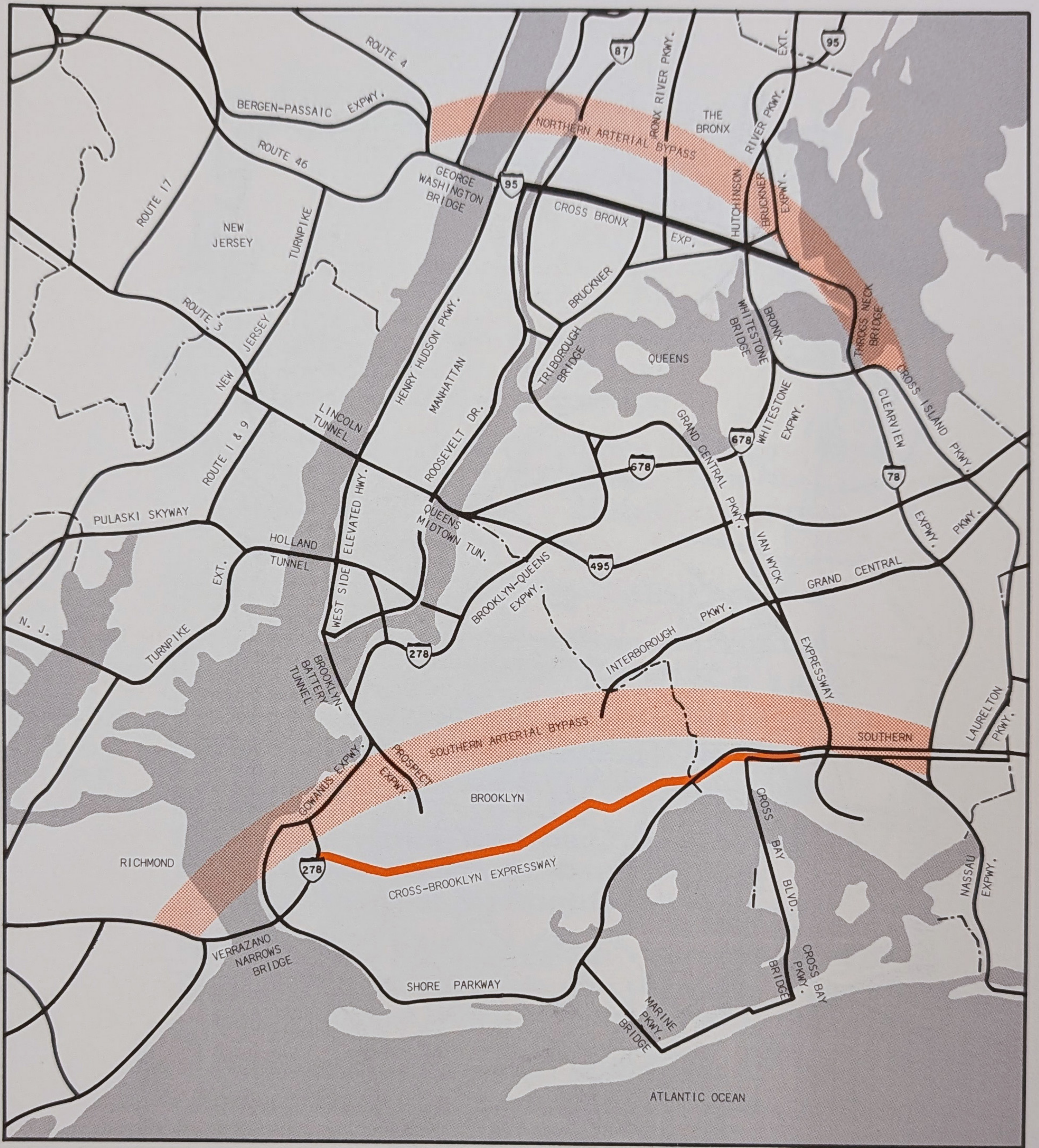
TBTA ROUTE LOCATION STUDY

Family Units Displaced	2	781	0	244	1027
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BRILL REDUCED RIGHT-OF-WAY

Family Units Displaced	2	298	0	183	483
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Decrease in Family Units Displaced 544



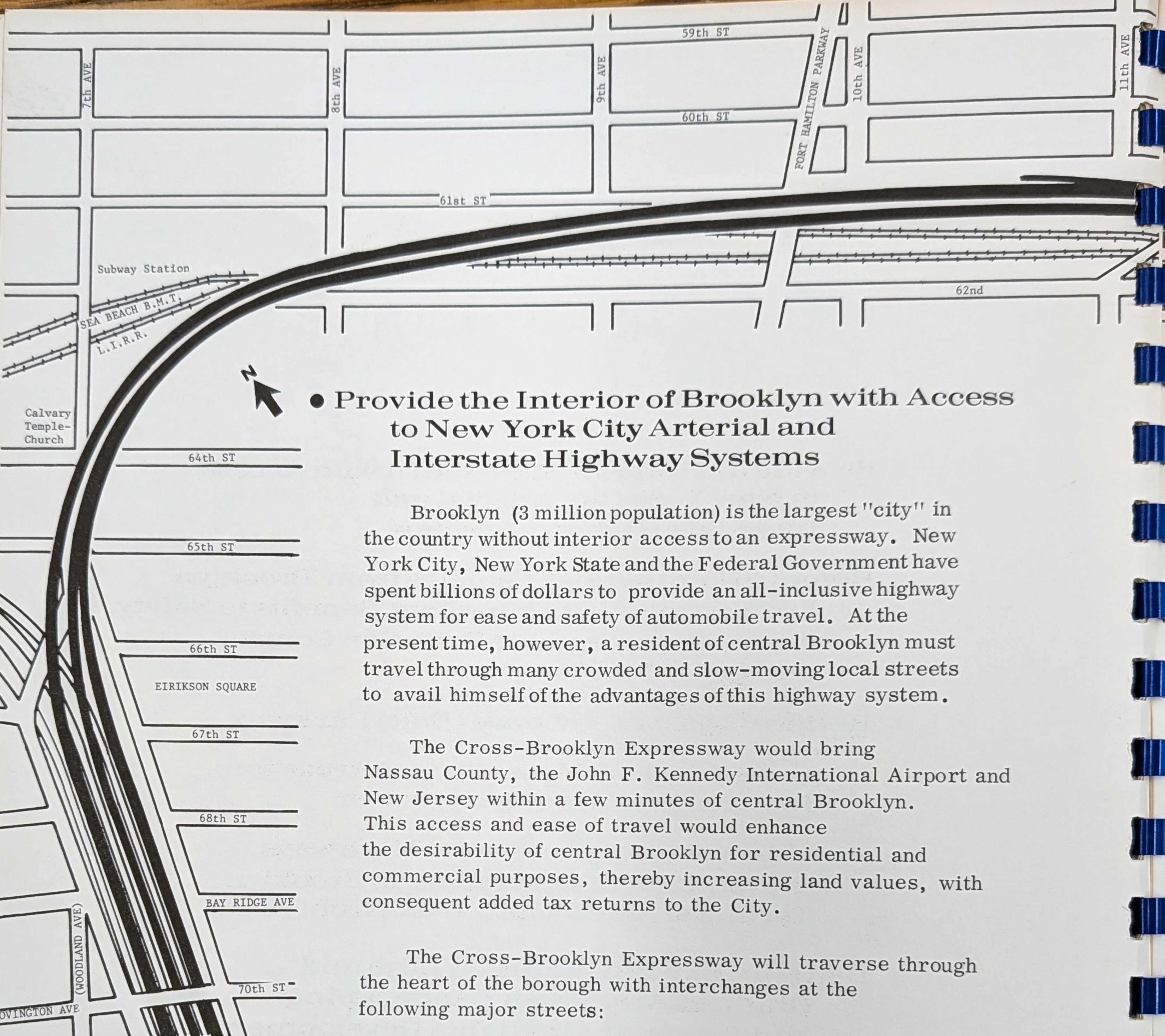
Area Plan



● INTERCHANGE

BENEFITS for **BROOKLYN**

- Provide the Interior of Brooklyn with Access to New York City Arterial and Interstate Highway Systems
- Remove Commercial Vehicles from Brooklyn Local Streets with Resultant Benefits to Safety, Noise Abatement, Air Pollution Control and Local Traffic
- Relieve Overloaded Shore (Belt) Parkway
- Improve Access to Recreational Areas for Residents of Brooklyn Interior
- Provide Necessary Improved Highways to Flatlands Industrial Park, Brooklyn Terminal Market and Waterfront Area
- Beautify Existing Railroad Line and Blighted Areas with Landscaping and Potential Air-Rights Development
- Provide New York City with Valuable Asset of Air-Rights Development through Acquisition of Railroad Right-of-Way for Highway
- Complete Southern Arterial Bypass of New York City Central Core Areas



• Provide the Interior of Brooklyn with Access to New York City Arterial and Interstate Highway Systems

Brooklyn (3 million population) is the largest "city" in the country without interior access to an expressway. New York City, New York State and the Federal Government have spent billions of dollars to provide an all-inclusive highway system for ease and safety of automobile travel. At the present time, however, a resident of central Brooklyn must travel through many crowded and slow-moving local streets to avail himself of the advantages of this highway system.

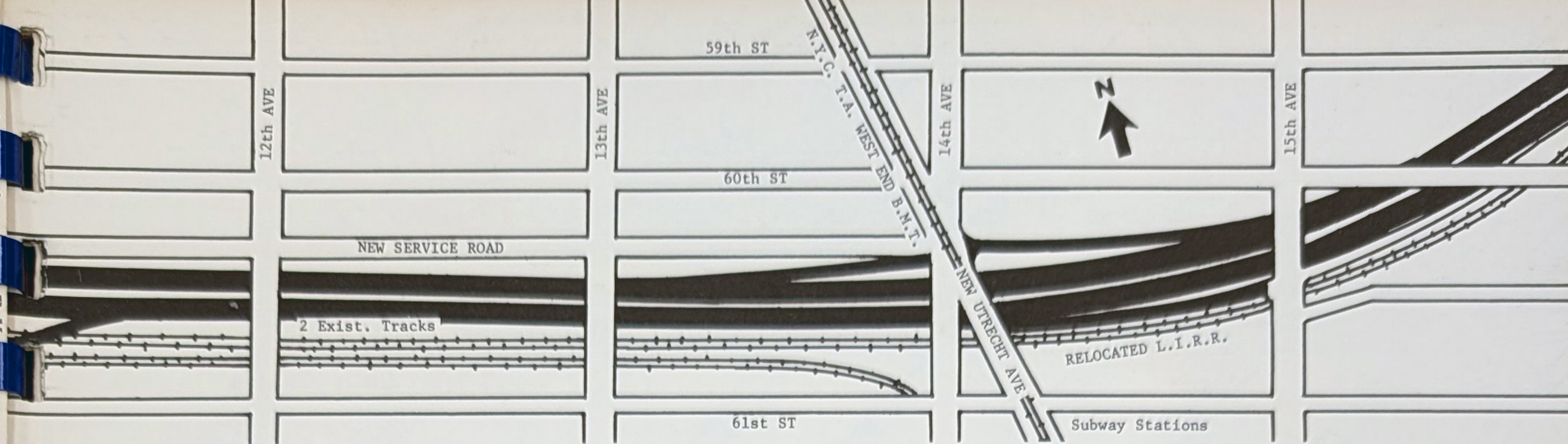
The Cross-Brooklyn Expressway would bring Nassau County, the John F. Kennedy International Airport and New Jersey within a few minutes of central Brooklyn. This access and ease of travel would enhance the desirability of central Brooklyn for residential and commercial purposes, thereby increasing land values, with consequent added tax returns to the City.

The Cross-Brooklyn Expressway will traverse through the heart of the borough with interchanges at the following major streets:

- Gowanus Expressway
- Fort Hamilton Parkway
- New Utrecht Avenue
- Nassau Expressway/Shore (Belt) Parkway
- Flatbush/Nostrand Avenue
- Ralph Avenue
- Pennsylvania Avenue

The highway using the existing L.I.R.R. (Bay Ridge Division) right-of-way could be built with minimum disruption to surrounding neighborhoods. This approach conforms to the concept of providing urban transportation with due regard to economic and human impact.

There is no other possible route through the borough which could be built with such relatively minor land condemnation.



- **Remove Commercial Vehicles from Brooklyn Local Streets with Resultant Benefits to Safety, Noise Abatement, Air Pollution Control and Local Traffic**

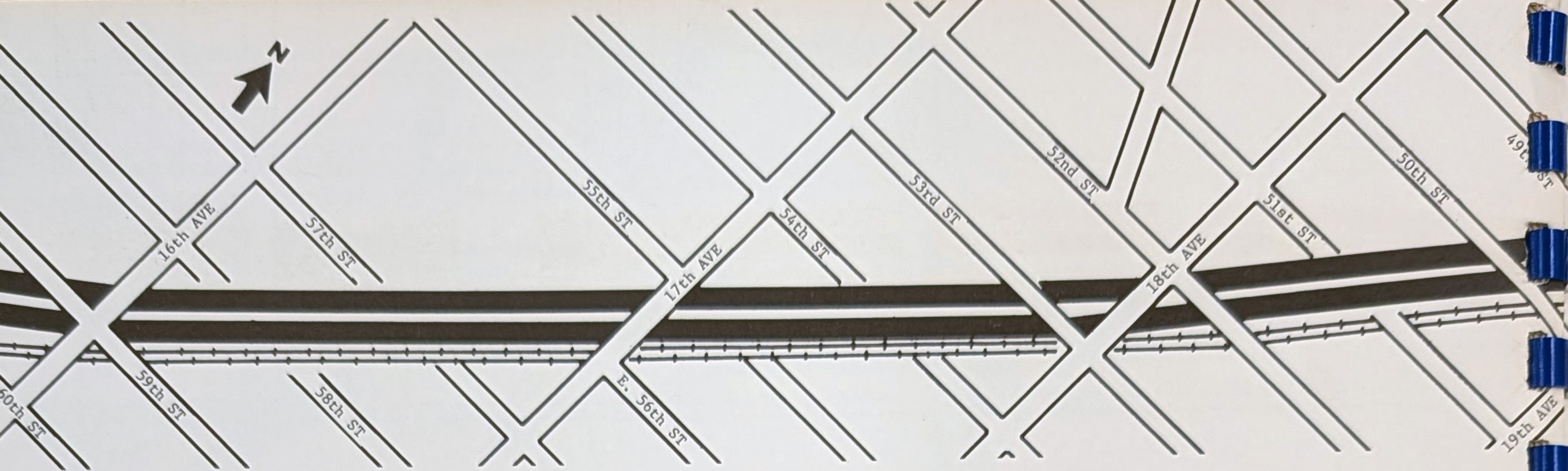
Presently, the only expressway in Brooklyn that handles commercial traffic is the overloaded Brooklyn-Queens Expressway on the northern tip of the borough. The Belt Parkway System was designed to accommodate passenger cars only.

Any trucks, trailer trucks and other commercial vehicles coming off the Verrazano-Narrows Bridge, or from the waterfront area, must use local streets to reach central Brooklyn or southern Nassau County. These large commercial vehicles overcrowd neighborhood streets and shopping areas, cause congestion, noise, air pollution and in general, endanger pedestrians and private motorists.

The proposed Cross-Brooklyn Expressway will allow commercial vehicles to quickly reach their desired area of operation, thereby minimizing their time on local streets. Through traffic will be completely removed from the neighborhood streets.

These Trucks Should Be Kept Off Local Streets





● Relieve Overloaded Shore (Belt) Parkway

The Shore Parkway is a scenic and circuitous route, and is usually operating at its maximum traffic capacity.

In future years this Parkway will become more and more overloaded, and the tie-ups—which are now well known to Brooklyn and New York drivers—will become even more frequent.

The Cross-Brooklyn Expressway will relieve the Shore Parkway by attracting the express or through traffic, thereby enabling the Parkway to better serve traffic to local communities along its length.

● Improve Access to Recreational Areas for Residents of Brooklyn Interior

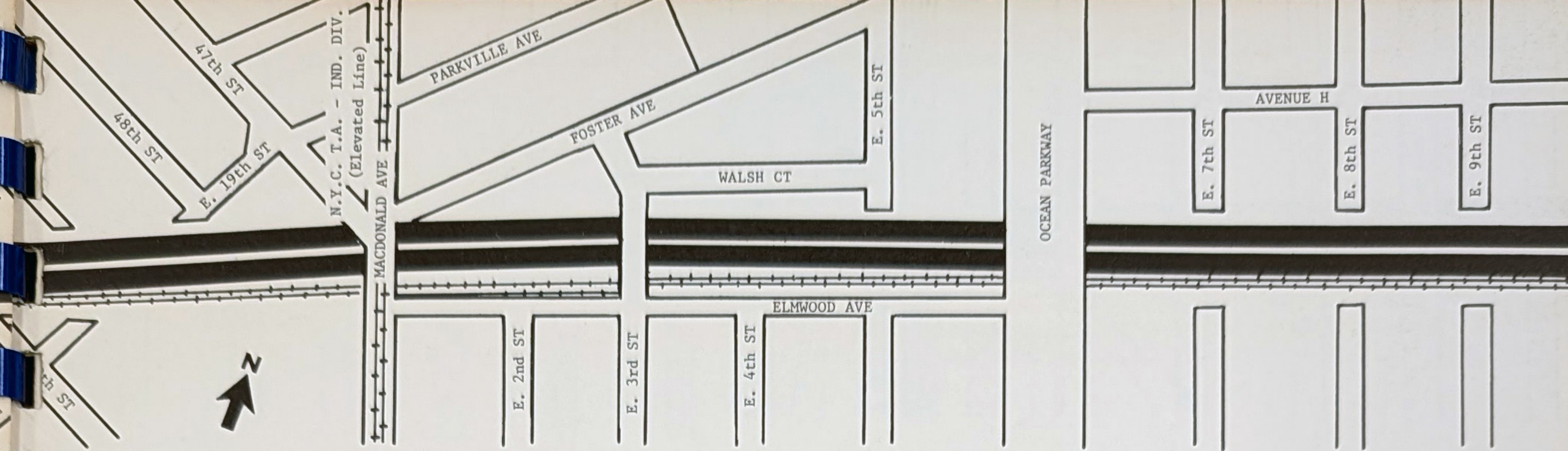
One state-city function is to provide recreational facilities for its residents. Due to the size of New York City major facilities are necessarily spread great distances from residential neighborhoods. Central Brooklyn suffers from the fact that it presently has no direct and fast route to most of the outlying areas.



The Cross-Brooklyn Expressway will provide access to the beaches, parks and golf courses of southern Nassau County, to the New Jersey Shore, to Dyker Beach Park, to Aqueduct Racetrack, as well as to the Rockaways. Since the Expressway will be connected at both ends with the other arterial routes around New York, all outlying recreational facilities are brought closer in time to Brooklyn residents.

In addition, after further study, it may prove feasible to construct playgrounds, sitting areas or vest-pocket parks over the highway where it is in a depressed section.

Traffic Tie-Ups Well Known to New York City Motorists



- **Provide Necessary Improved Highways to Flatlands Industrial Park, Brooklyn Terminal Market and Waterfront Area**

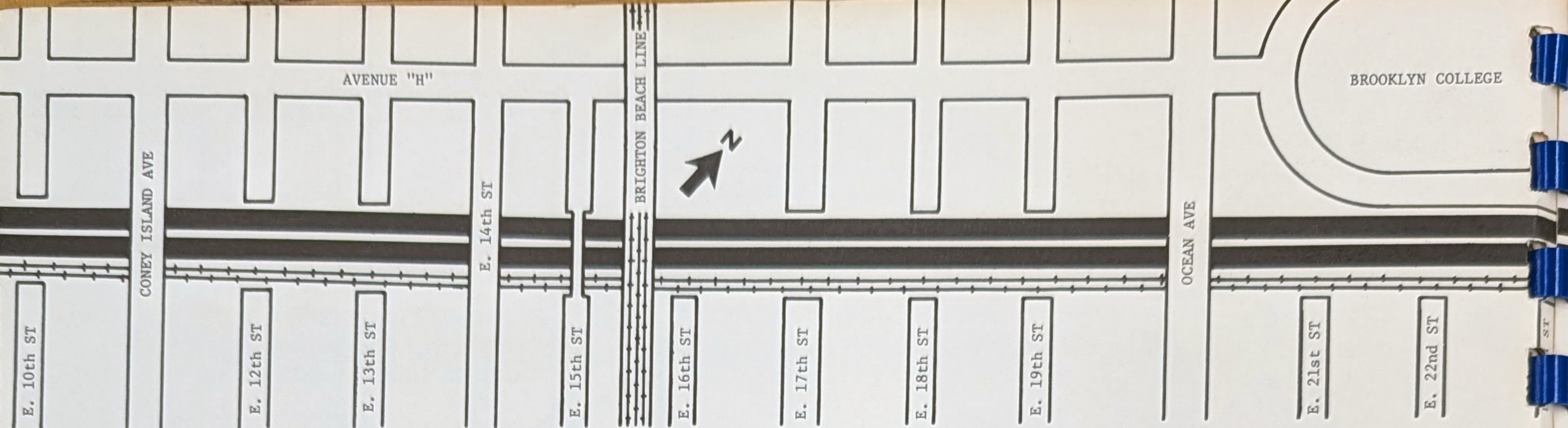
All industry and commerce must have adequate transportation in order to function. Commerce and industry are obviously vital to all communities to provide jobs, pay taxes and thereby increase the wealth of the City.

Industrial developments proposed for the Flatlands area of Brooklyn will require efficient highway access. This highway would also service the existing industry and will attract new business into this area.

The Brooklyn Terminal Markets are presently being hindered by the lack of access. All trucking moves through local streets. If the situation continues to worsen, it could become advantageous to move the markets to newer and more easily accessible areas in another borough. This would result in a loss of jobs, and possibly higher prices due to greater transportation costs to Brooklyn.

The waterfront area including the Brooklyn Army Terminal is being considered for redevelopment and renovation. Access to the area from central Brooklyn becomes very desirable. Presently, due to the lack of an arterial, all traffic to and from the waterfront moves on neighborhood streets.

The Cross-Brooklyn Expressway will allow trucking to service industrial areas without the necessity of traveling through residential neighborhoods. It will attract industry and commercial establishments for the overall improvement of Brooklyn.

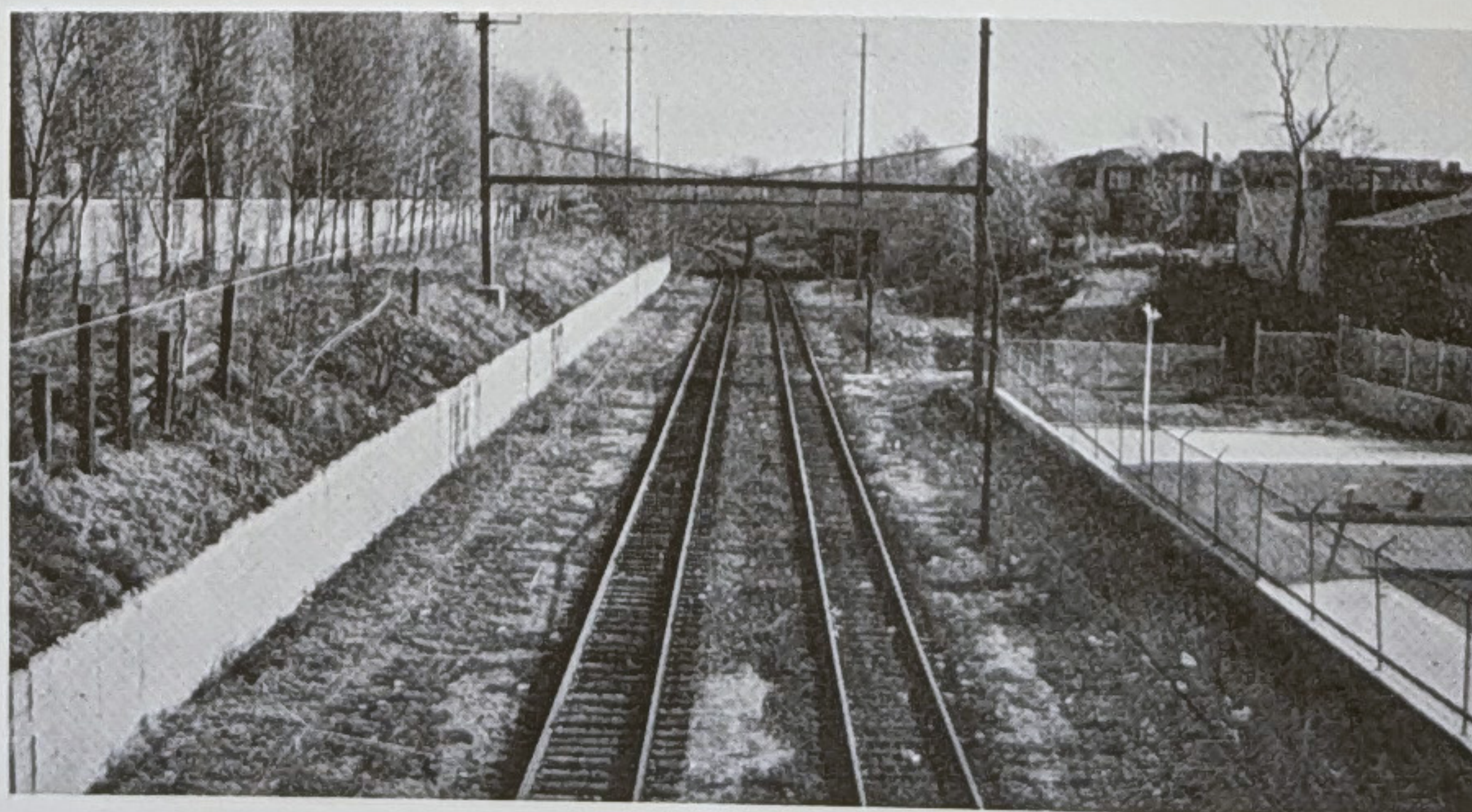


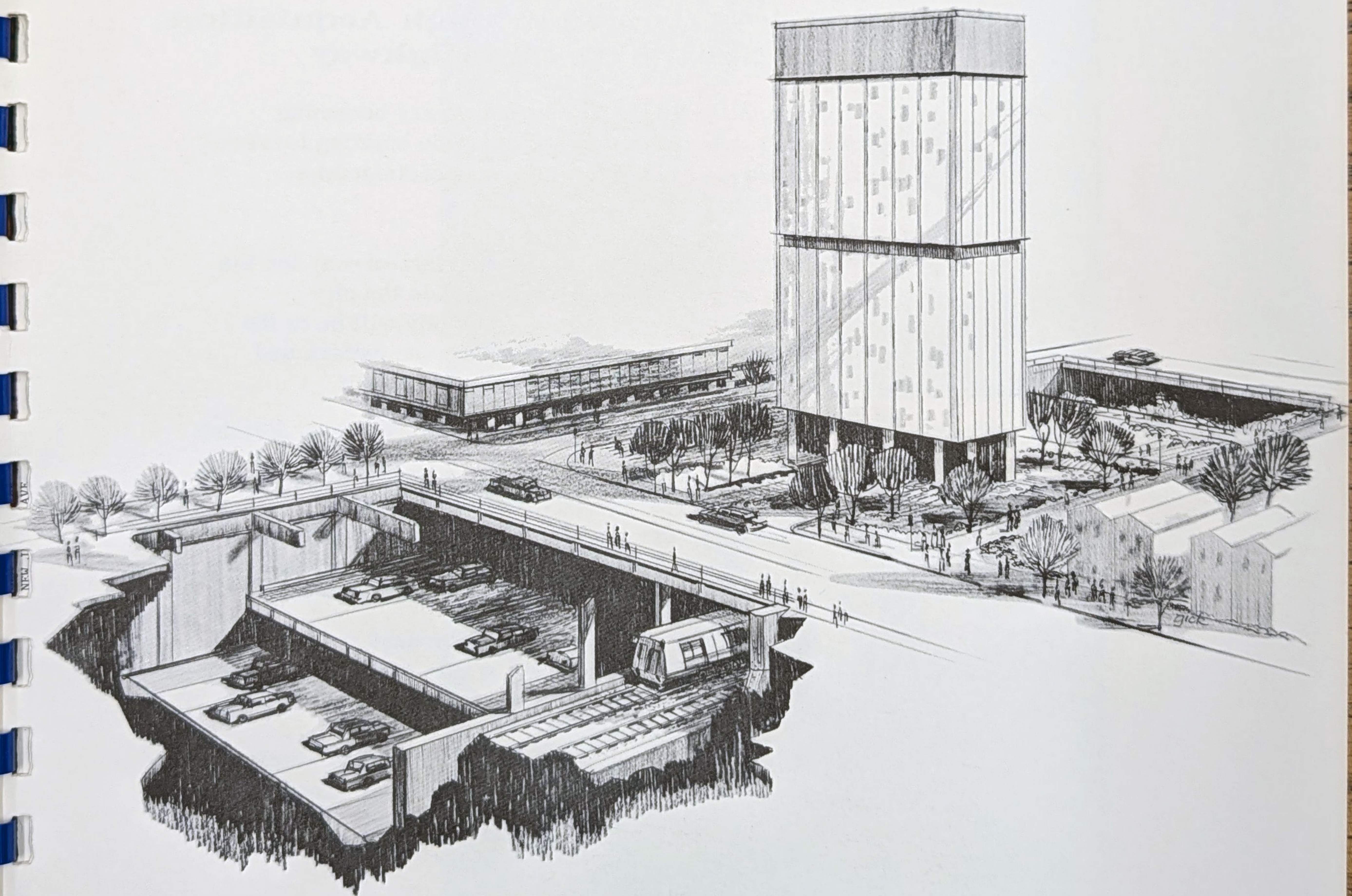
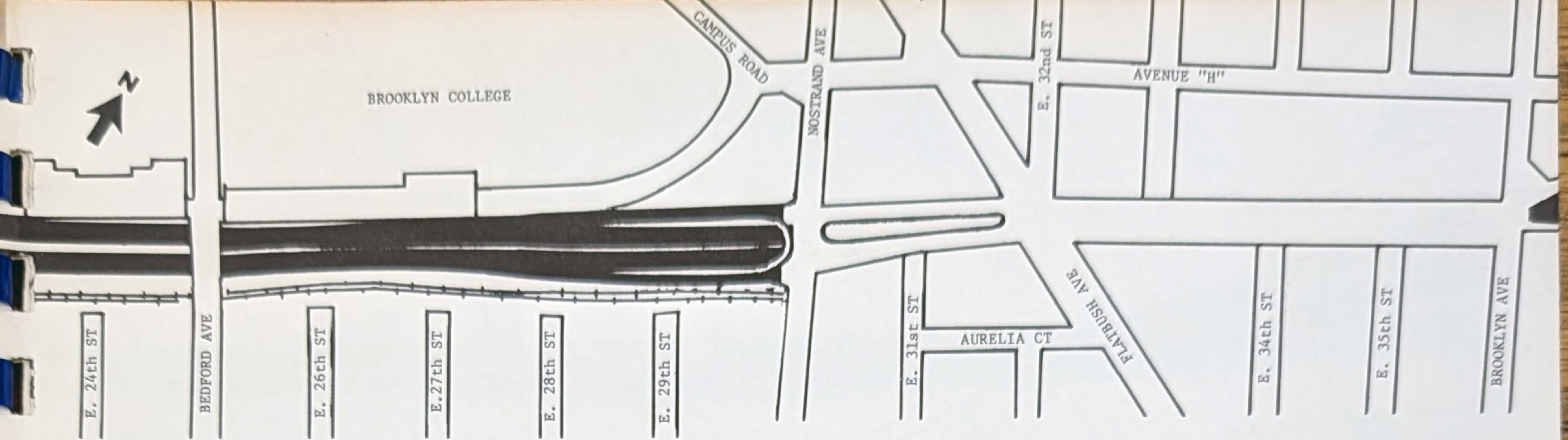
● Beautify Existing Railroad Line and Blighted Areas with Landscaping and Potential Air-Rights Development

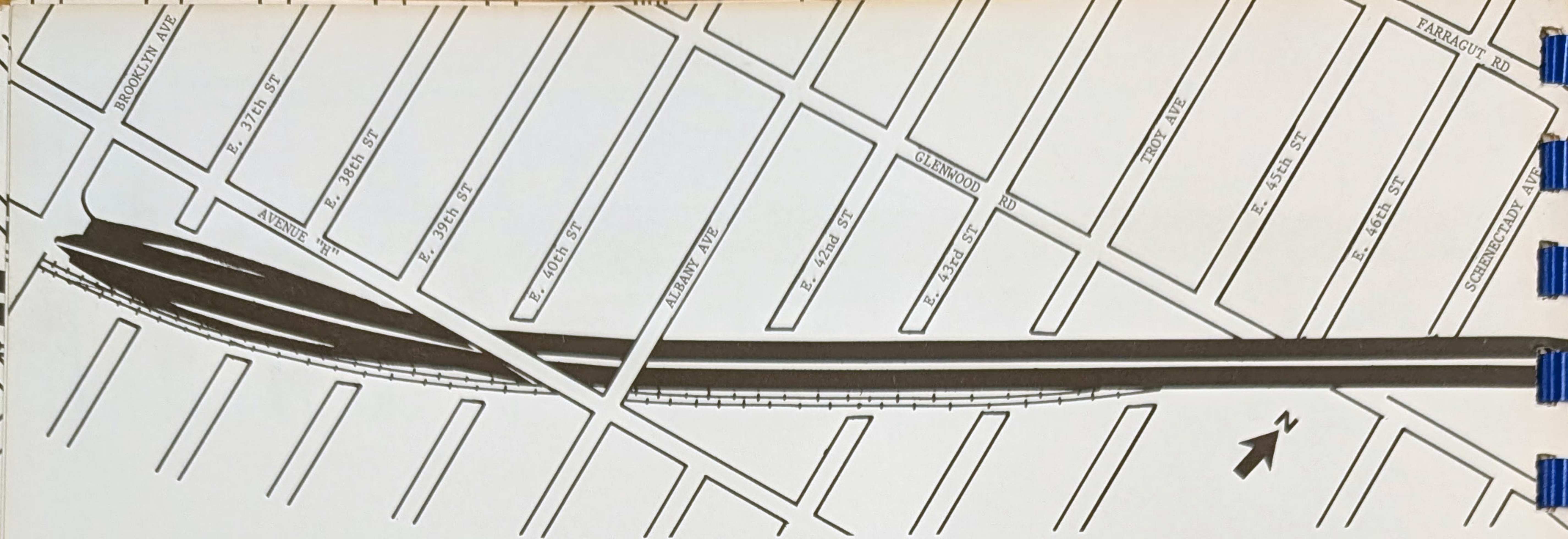
The advantage of using an existing right-of-way for a major portion of the proposed roadway, brings with it the opportunity of correcting an existing eyesore. The present railroad is in a cut section which is incongruous with the residential neighborhoods through which it runs.

The building of a modern landscaped expressway with the present-day emphasis on beautification could better the situation substantially. With the advent of air-rights developments, the right-of-way could be changed from an eyesore to a pleasing architectural experience by the addition of housing, schools, vest-pocket parks, playgrounds and sitting areas along and above the right-of-way.

In the Flatland-Pennsylvania Avenues area, the Expressway right-of-way will eliminate a vast amount of eyesores such as automobile graveyards, junkyards and illegal dumping grounds. It could become the impetus to upgrade the area.







● Provide New York City with Valuable Asset of Air-Rights Development through Acquisition of Railroad Right-of-Way for Highway

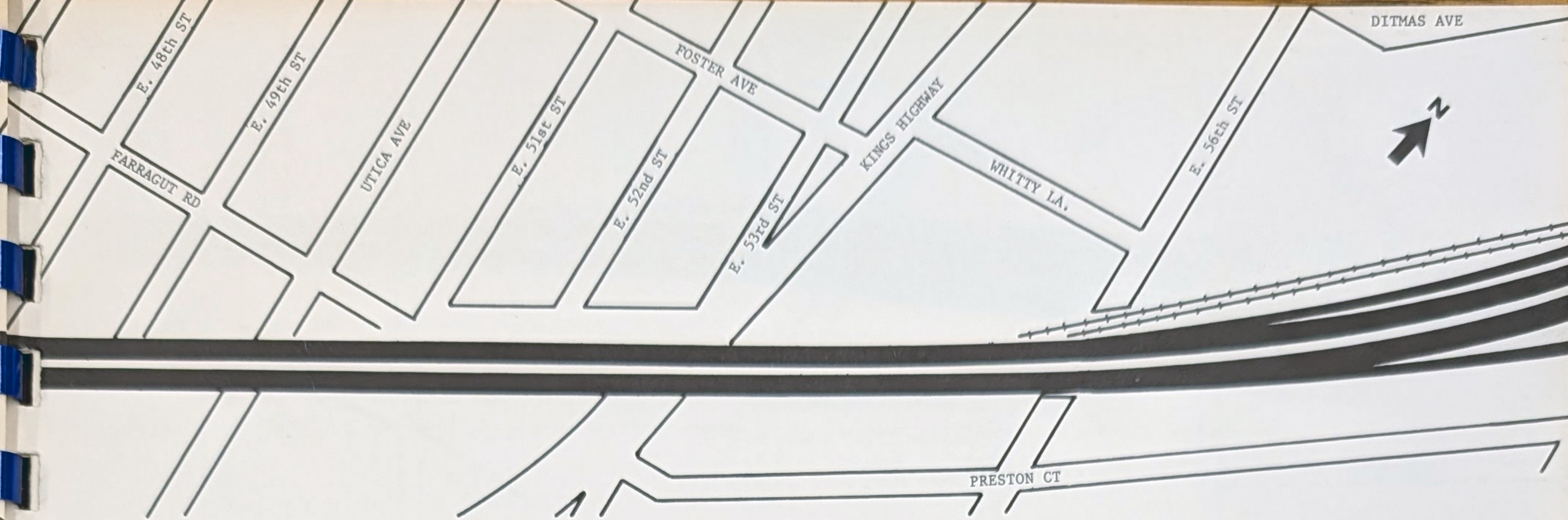
Air rights in a central urban area are becoming extremely valuable because they provide building locations within a built-up area with a minimum of dislocation and disruption.

The acquisition of the L.I.R.R. right-of-way for the Cross-Brooklyn Expressway will provide the city with the bonus of the air rights. The city will be in the position of determining and controlling the pattern and usage of the development for the overall benefit of Brooklyn residents.

The air rights could be used for sorely needed housing or new schools. Playgrounds, parking areas or vest-pocket parks are also possibilities. Where needed, the rights could be used for commercial development such as shopping centers to service local neighborhoods.

The air-rights development will be used in the future. The benefit derived here is that the City will determine its use and reap the maximum benefits.

Air-rights developments bring a tax return which, in the Cross-Brooklyn Expressway situation, should far exceed any tax losses due to the private land acquisitions required for the roadway.

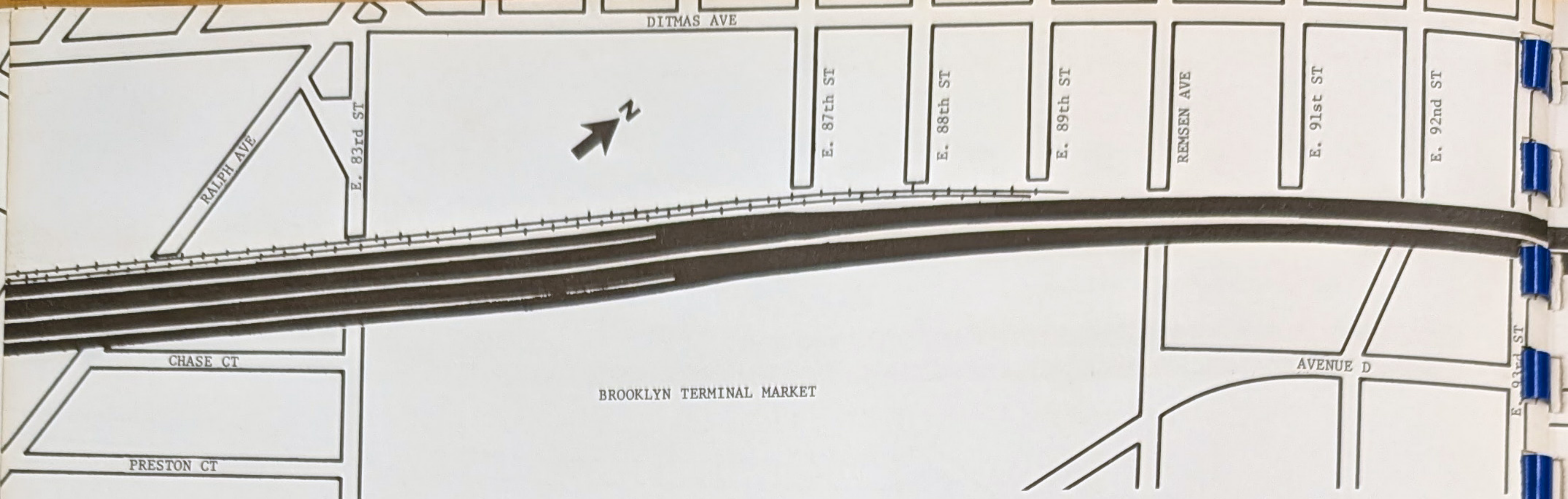


Existing New York City Air-Rights Development

Port Authority of New York



Same Development Showing Minimal Visual Impact



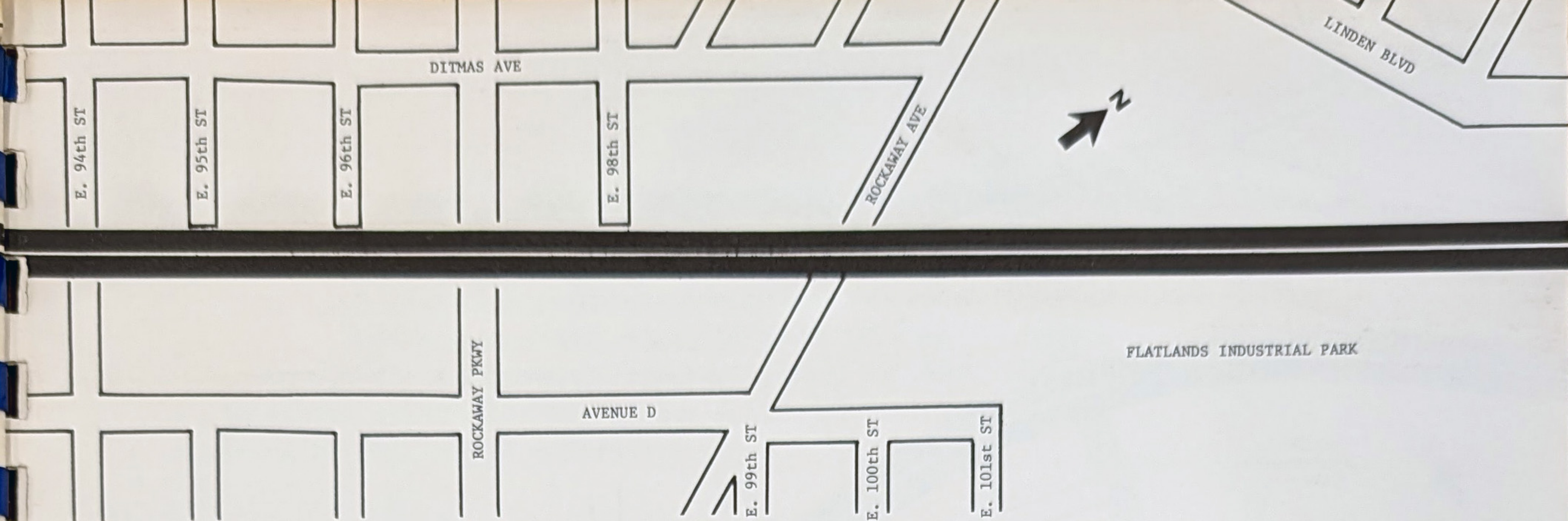
● Complete Southern Arterial Bypass of New York City Central Core Areas

The New York City Arterial Highway System is a long-range plan to provide New York City with an all-inclusive highway system for the convenience of its residents. This system provides for routing traffic around heavily congested areas and allows residents of all parts of the City to travel with ease and safety.

A portion of the system provides for a northern bypass and a southern bypass of the New York City central business areas. The northern bypass (see Area Plan) routes traffic across the George Washington Bridge, the Cross-Bronx Expressway to the Throgs Neck and Whitestone Bridges, and the New England Thruway.

The southern bypass consists of the Verrazano-Narrows Bridge, the Cross-Brooklyn Expressway and the Nassau Expressway. The Cross-Brooklyn Expressway forms the heart of this bypass. It is the logical supplement to the Verrazano-Narrows Bridge.

The need for this bypass is self-evident. Without it, through traffic from New Jersey to Nassau and Suffolk Counties must use the congested Shore Parkway, Brooklyn-Queens and Long Island Expressways or local Brooklyn streets.



PROJECT DESCRIPTION of EXPRESSWAY

The Cross-Brooklyn Expressway, as developed in the Route Selection Study prepared for the Triborough Bridge and Tunnel Authority, is divided into four sections within the limits of the Gowanus Expressway and the Shore (Belt) Parkway:

- Section 1 Gowanus Expressway to Fort Hamilton Parkway
- Section 2 Fort Hamilton Parkway to Albany Avenue
- Section 3 Albany Avenue to Van Sinderen Avenue
- Section 4 Van Sinderen Avenue to Shore Parkway

The strip maps on the top of the pages follow the route and roadway orientation shown in the TBTA Route Selection Study. Our review of the study has been limited to determining whether modification in the roadway orientation can be made to minimize private land acquisition.

Section 1 - Gowanus Expressway to Fort Hamilton

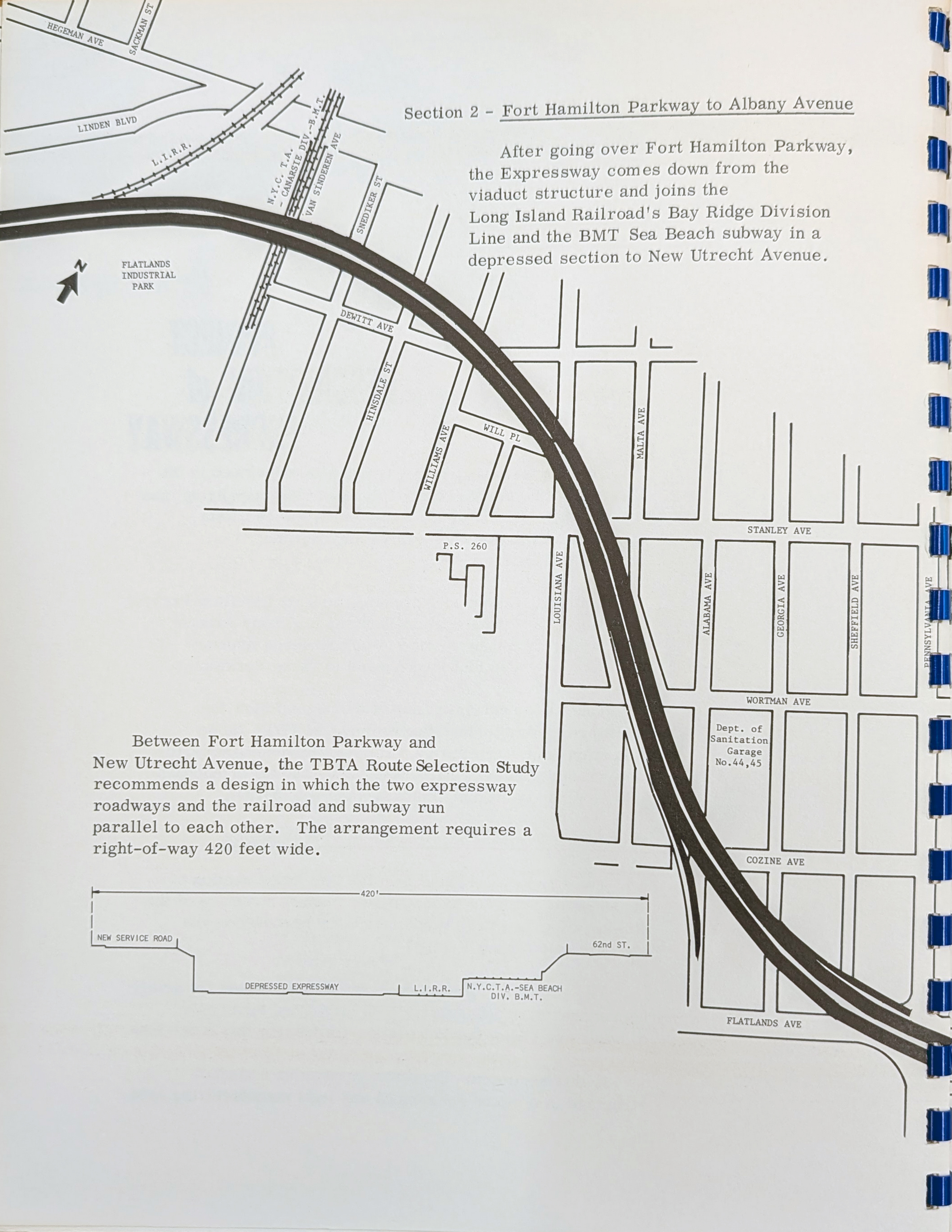
The route studied begins in the Bay Ridge section of Brooklyn at Ovington Avenue on the viaduct structure of the Gowanus Expressway, which forms the approach to the Verrazano-Narrows Bridge.

The Cross-Brooklyn Expressway route leaves the bridge approaches at approximately 65th Street and turns east to enter and follow the Long Island Railroad's Bay Ridge Line.

In this section the Expressway remains a viaduct structure in a mixed residential and light manufacturing area.

Section 2 - Fort Hamilton Parkway to Albany Avenue

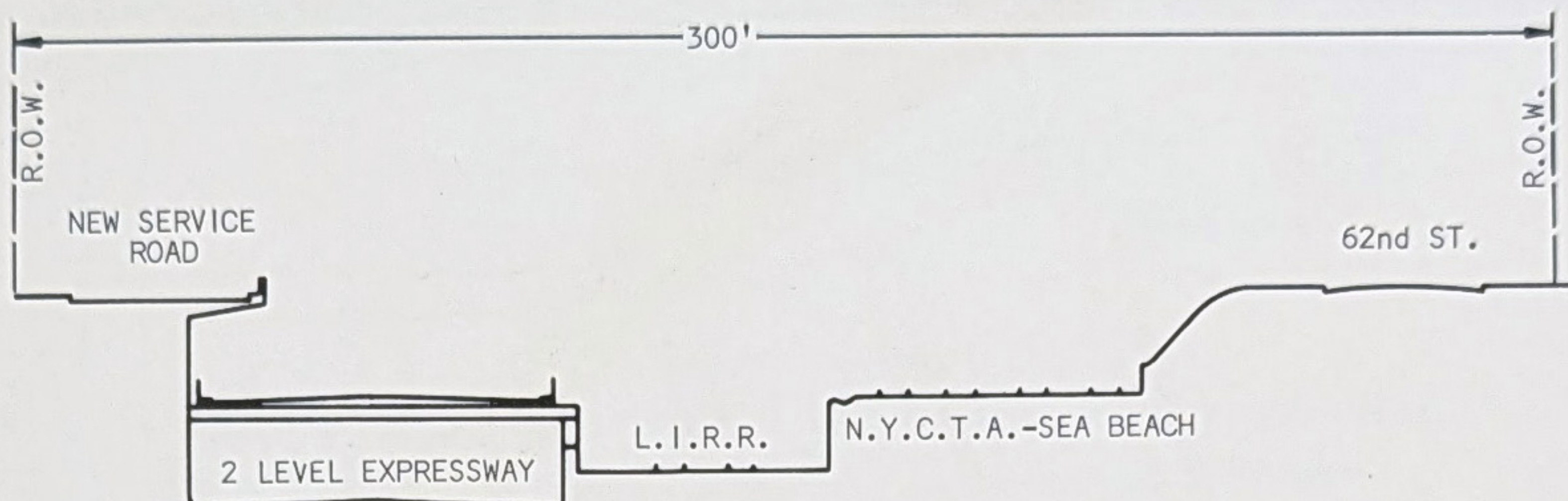
After going over Fort Hamilton Parkway, the Expressway comes down from the viaduct structure and joins the Long Island Railroad's Bay Ridge Division Line and the BMT Sea Beach subway in a depressed section to New Utrecht Avenue.



Between Fort Hamilton Parkway and New Utrecht Avenue, the TBTA Route Selection Study recommends a design in which the two expressway roadways and the railroad and subway run parallel to each other. The arrangement requires a right-of-way 420 feet wide.

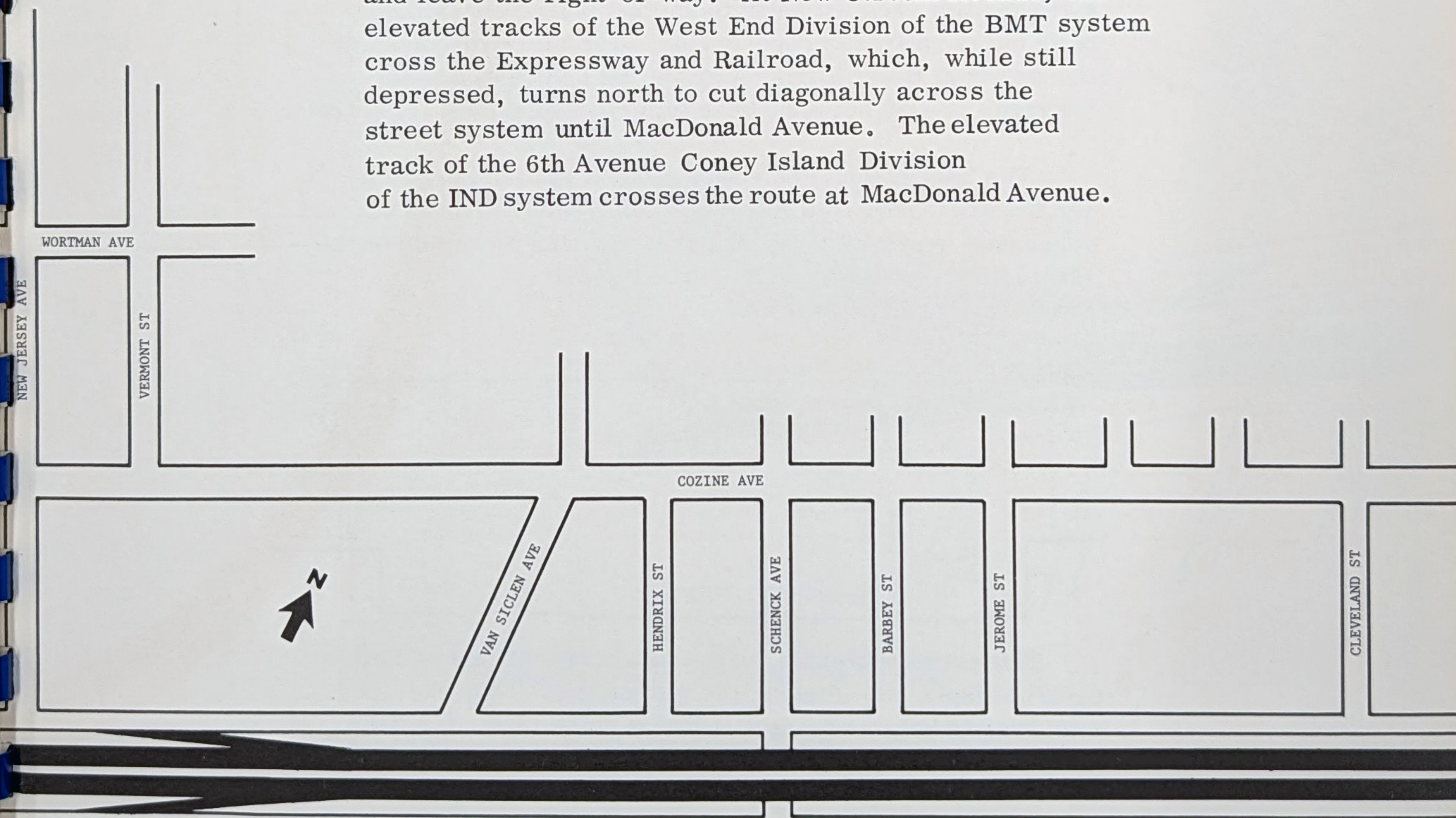
With this right-of-way width, 61st Street and half the block to 60th Street would have to be acquired.

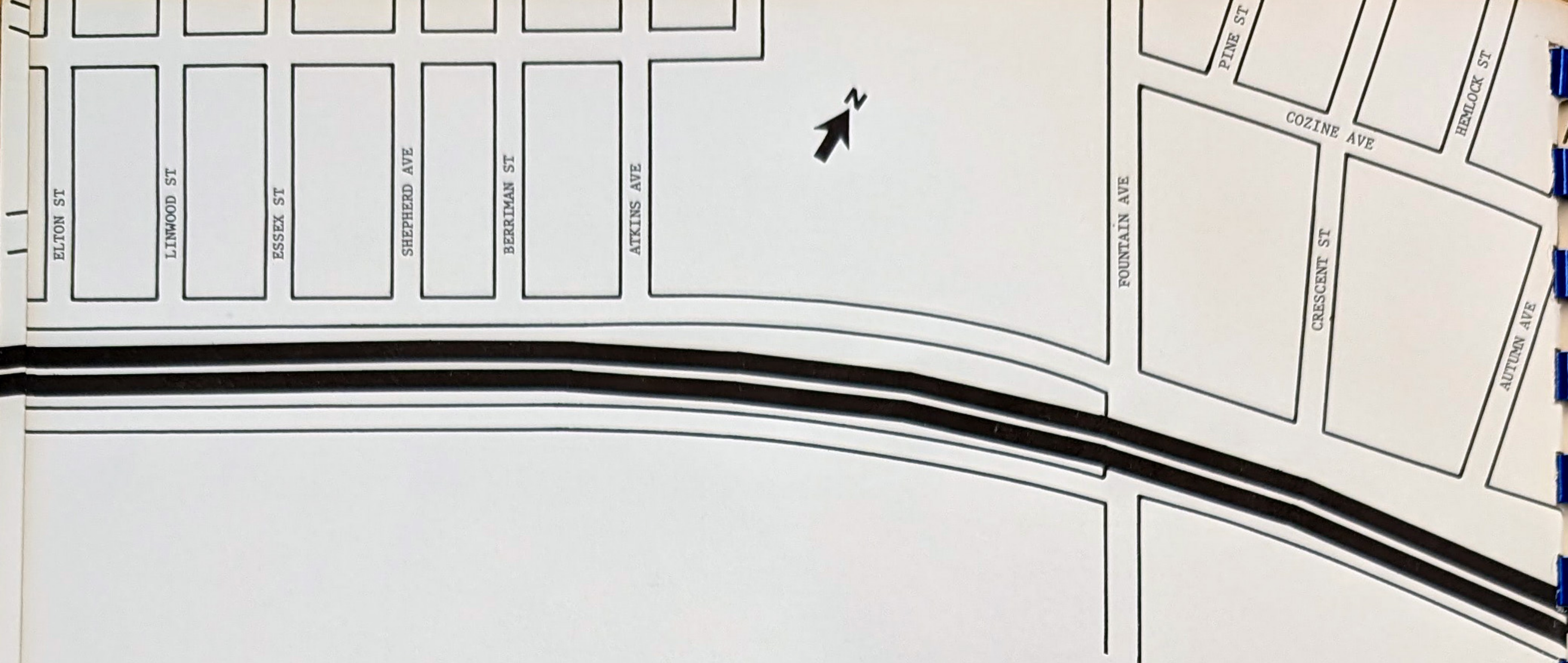
If the roadways were placed one above the other and the service road were partially cantilevered over the expressway, the right-of-way would be reduced to about 300 feet.



If this arrangement is adopted, nearly all the homes in this area could be saved.

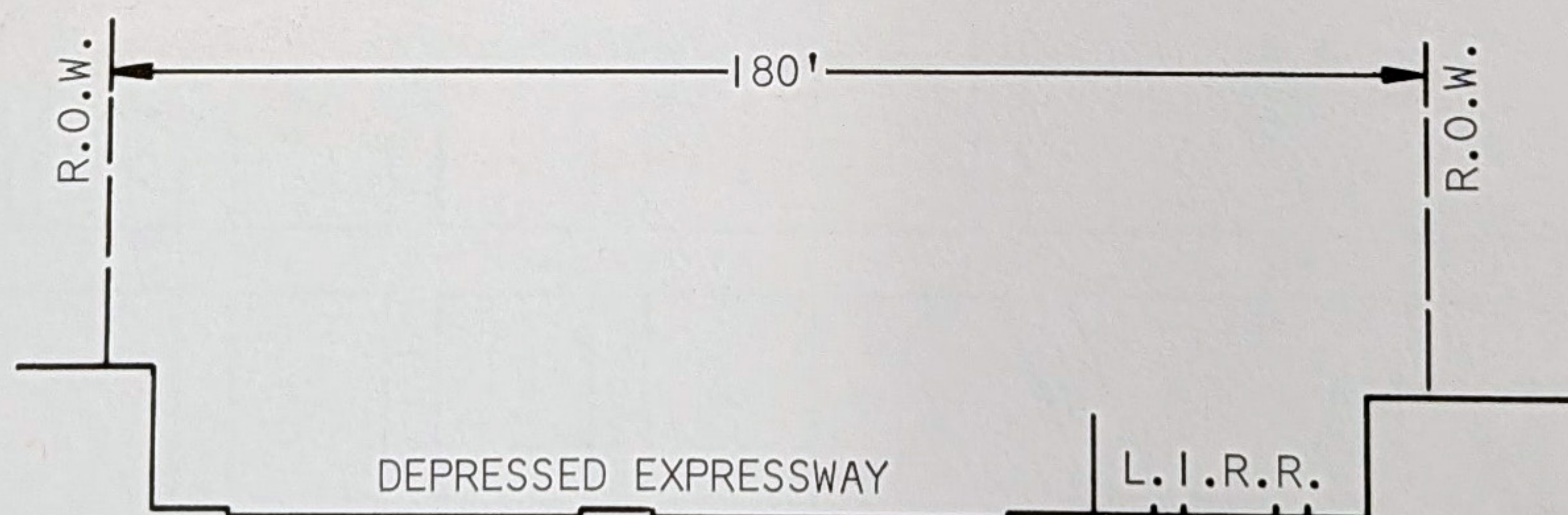
At 14th Avenue the BMT Sea Beach Lines turn south and leave the right-of-way. At New Utrecht Avenue, the elevated tracks of the West End Division of the BMT system cross the Expressway and Railroad, which, while still depressed, turns north to cut diagonally across the street system until MacDonald Avenue. The elevated track of the 6th Avenue Coney Island Division of the IND system crosses the route at MacDonald Avenue.



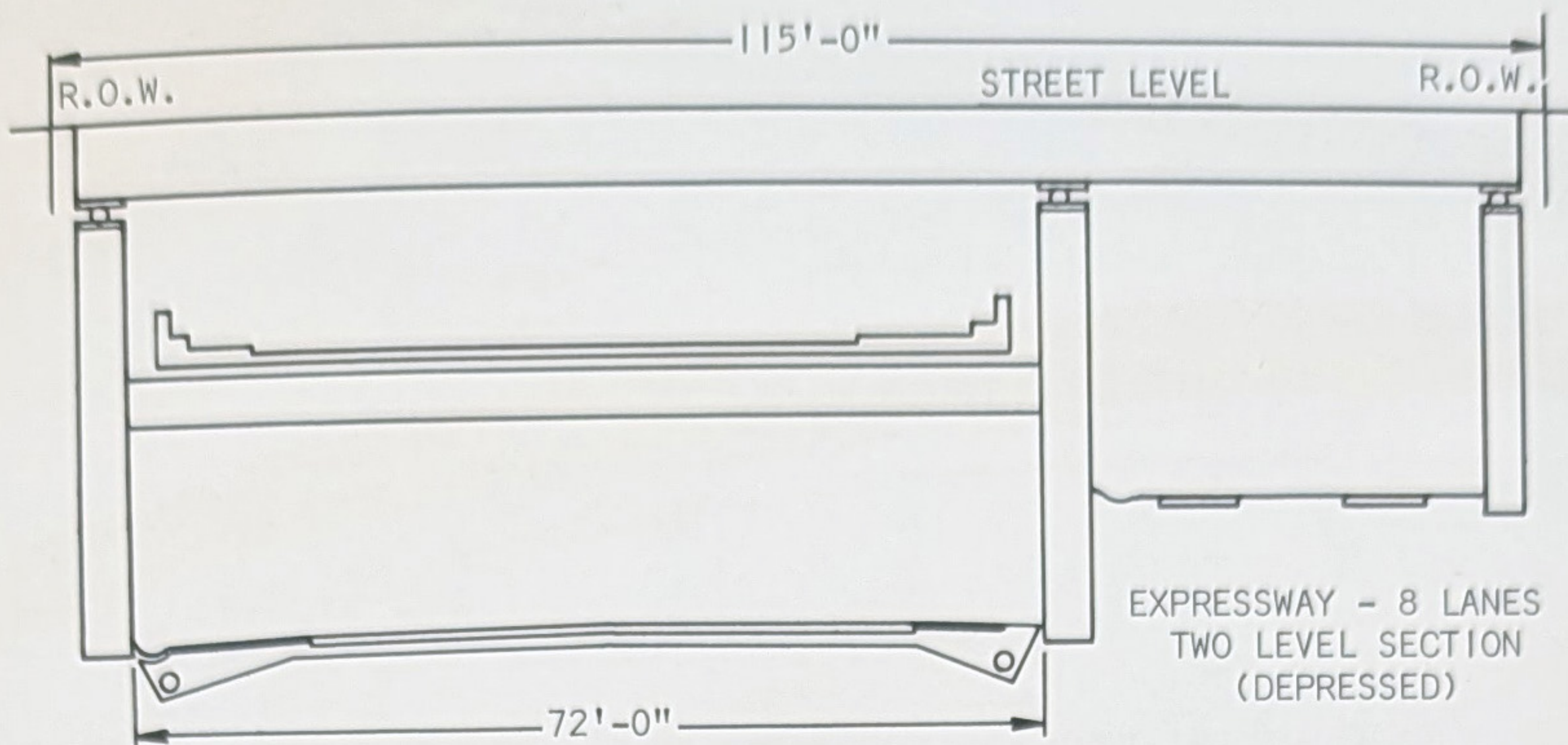


From MacDonald Avenue to Albany Avenue, the Expressway and the Railroad continue depressed through a residential area with apartment and private houses built to the railroad property line. The elevated tracks of the Brighton Beach Division of the BMT system cross the right-of-way between East 15th Street and East 16th Street.

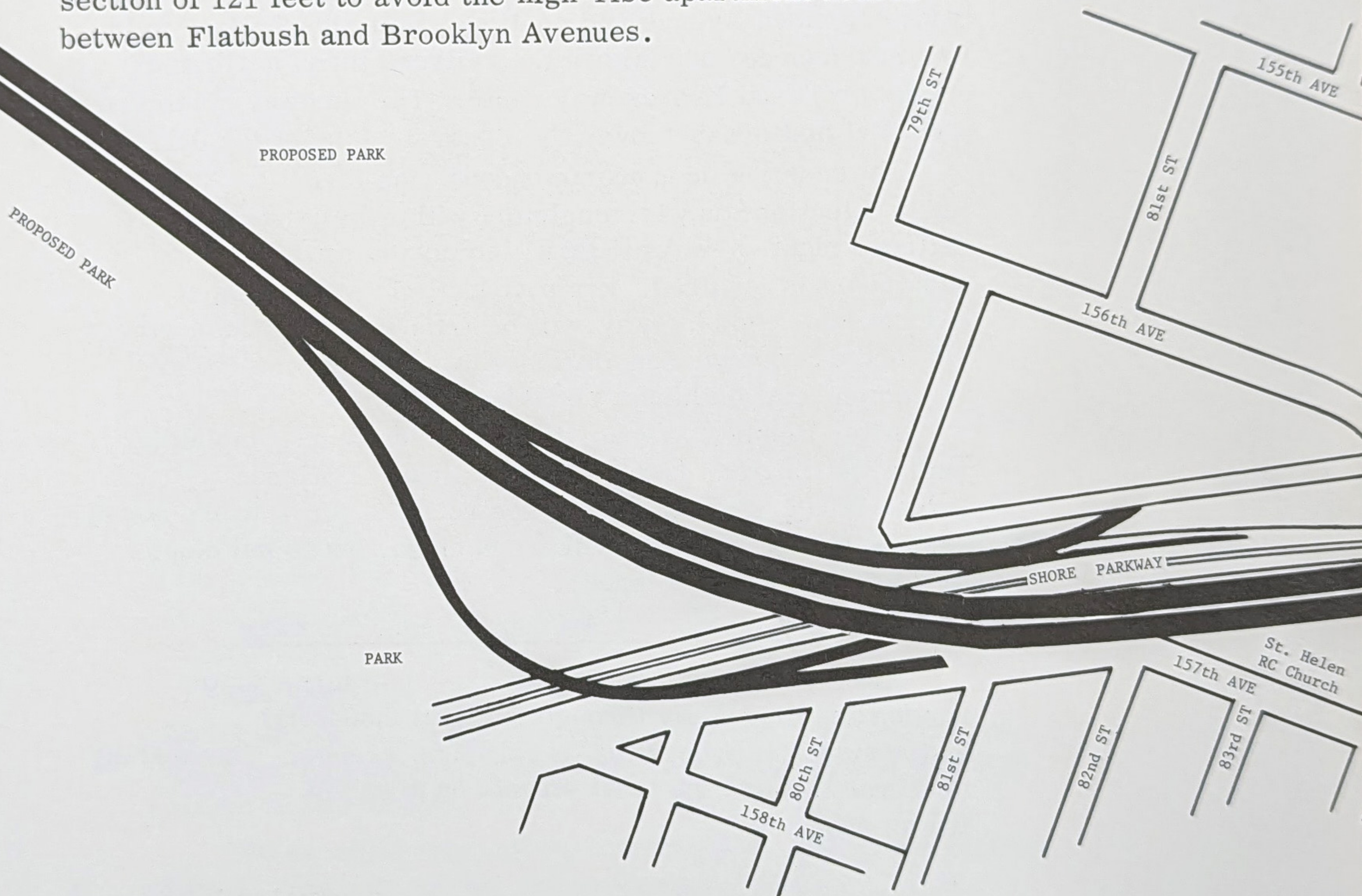
The TBTA Route Selection Study's recommendation for the area from 16th Avenue to Nostrand Avenue is a depressed expressway on the level with and alongside of the Long Island Railroad tracks. The typical cross section is as follows:



This cross section will require that a great many family units be displaced. Placing the one roadway above the other would save a large percentage of these units. Because of the great reduction in land acquisition requirements, we recommend that the following roadway arrangement be studied to determine its overall feasibility.

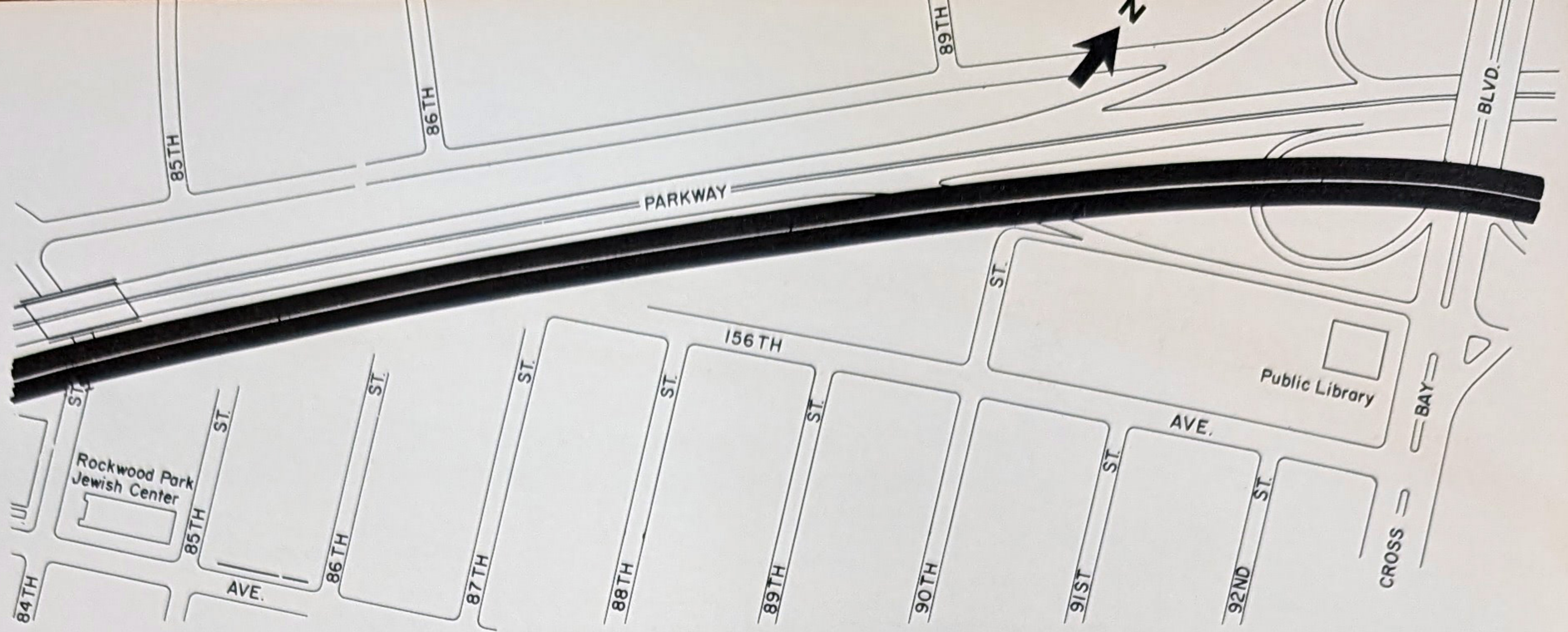


From Nostrand Avenue the eight lanes become six lanes, and the required right-of-way tapers to a restricted section of 121 feet to avoid the high-rise apartment houses between Flatbush and Brooklyn Avenues.



Section 3 - Albany Avenue to Van Sinderen Avenue

From Albany Avenue the roadway climbs from the depressed section to a viaduct over the existing railroad embankment, which is presently one level above existing street grades.



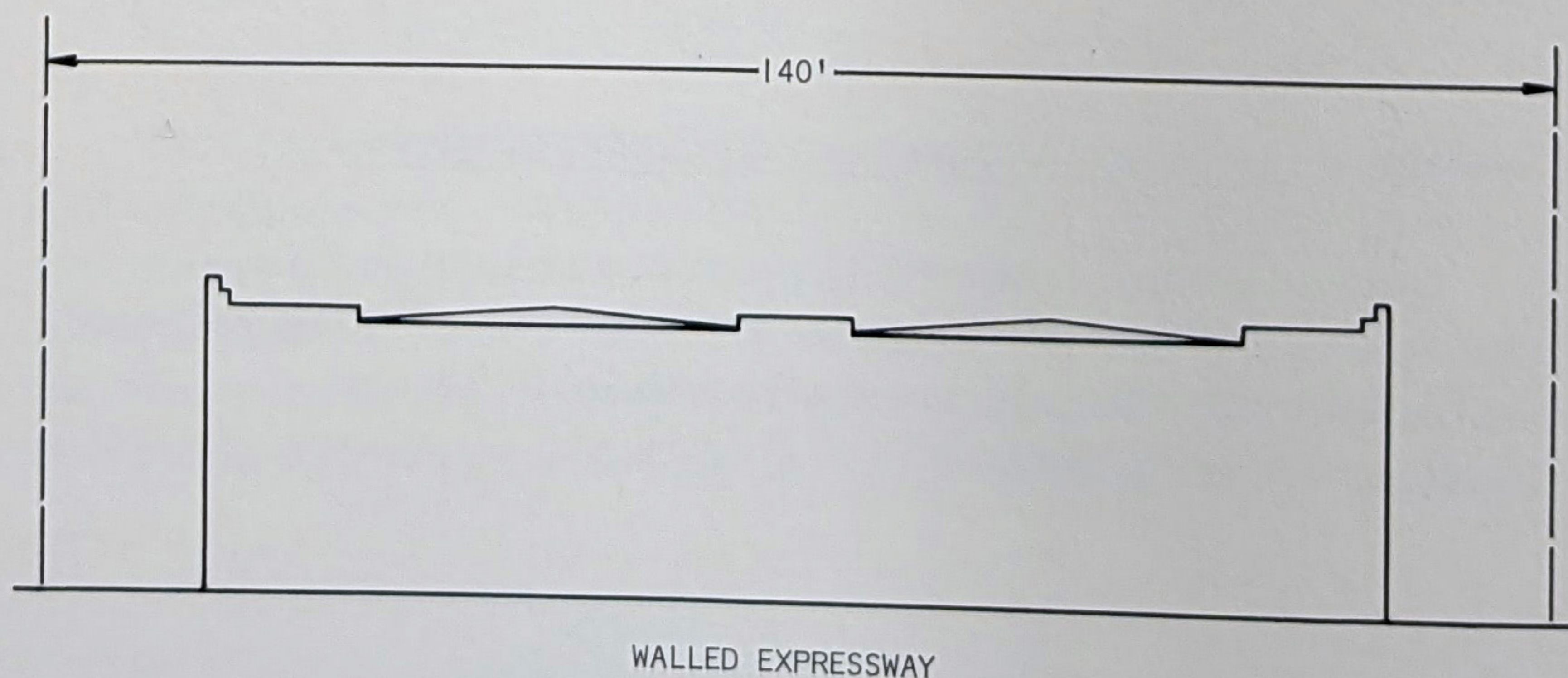
At Ralph Avenue the roadway descends to the level of the railroad embankment with the railroad on the north side and the Brooklyn Terminal Market on the south side. The roadway again climbs to a viaduct over the railroad before Remsen Avenue and continues with this section to Van Sinderen Avenue where the railroad turns north and off the proposed Expressway route. The roadway continues on a viaduct and crosses over the Canarsie Line of the BMT System.

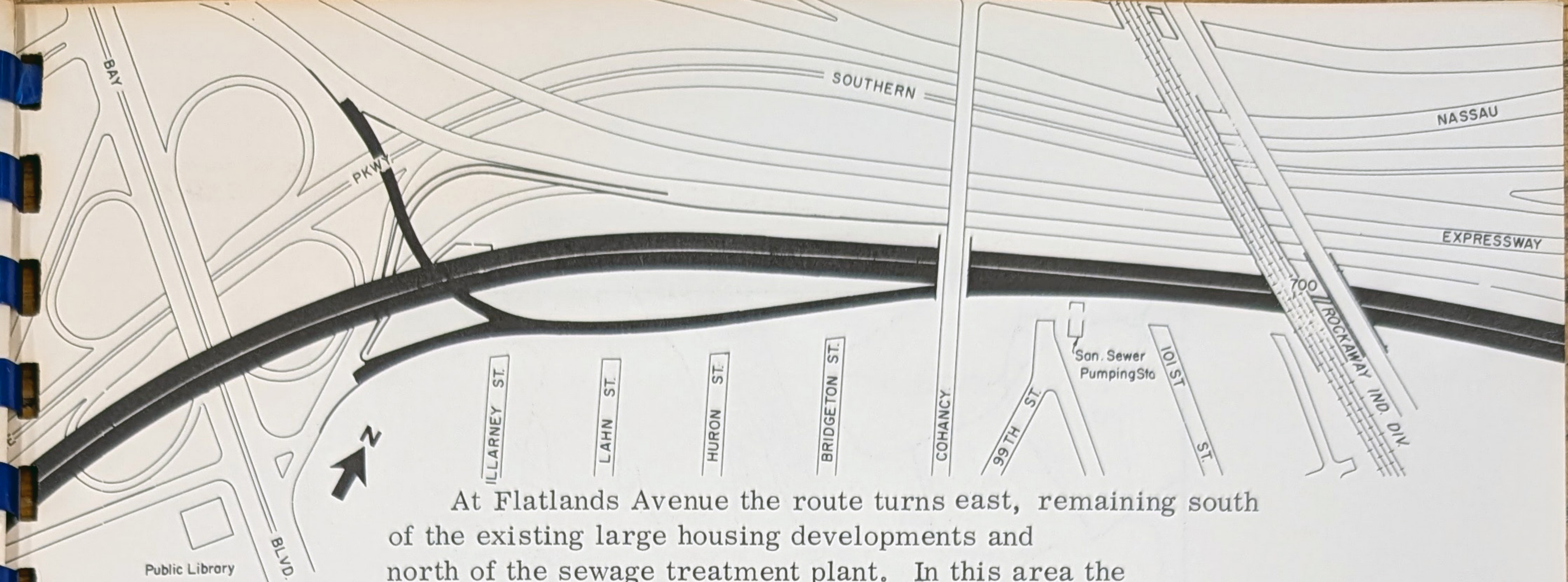
The construction recommended by the TBTA Route Selection Study is completely within the existing railroad right-of-way to Kings Highway; therefore no land acquisition is required. From Kings Highway to Remsen Avenue some right-of-way will be required from the northern side of the Brooklyn Terminal Market. It is estimated that 11 commercial buildings would be affected.

After Remsen Avenue, the Expressway is completely within the railroad right-of-way until the Flatlands Industrial Park area. Where the railroad turns to the north, some Flatlands property will be required, but no buildings or residences are included.

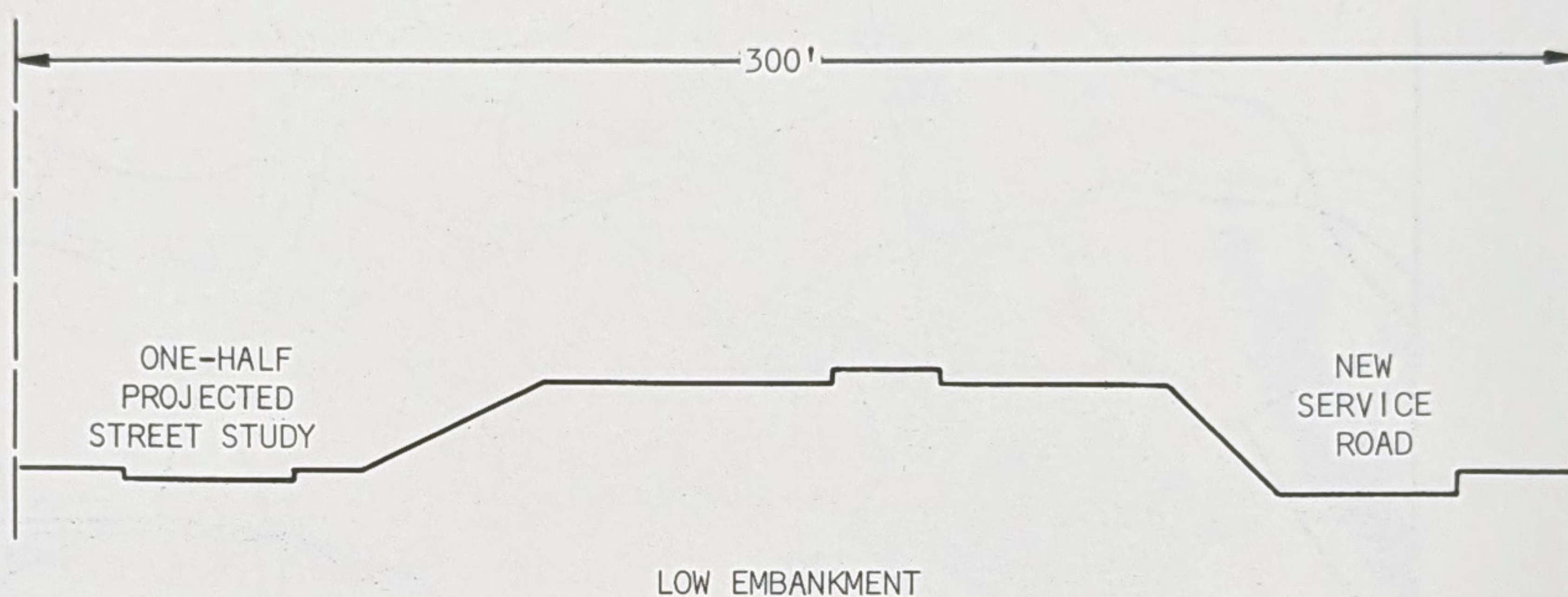
Section 4 - Van Sinderen Avenue to Shore Parkway

After Van Sinderen Avenue, the route turns south, proceeding diagonally through the light industrial and residential properties to Flatlands Avenue. The roadway is elevated above the local streets on a walled fill as shown.





At Flatlands Avenue the route turns east, remaining south of the existing large housing developments and north of the sewage treatment plant. In this area the Expressway is on a low embankment over vacant land.



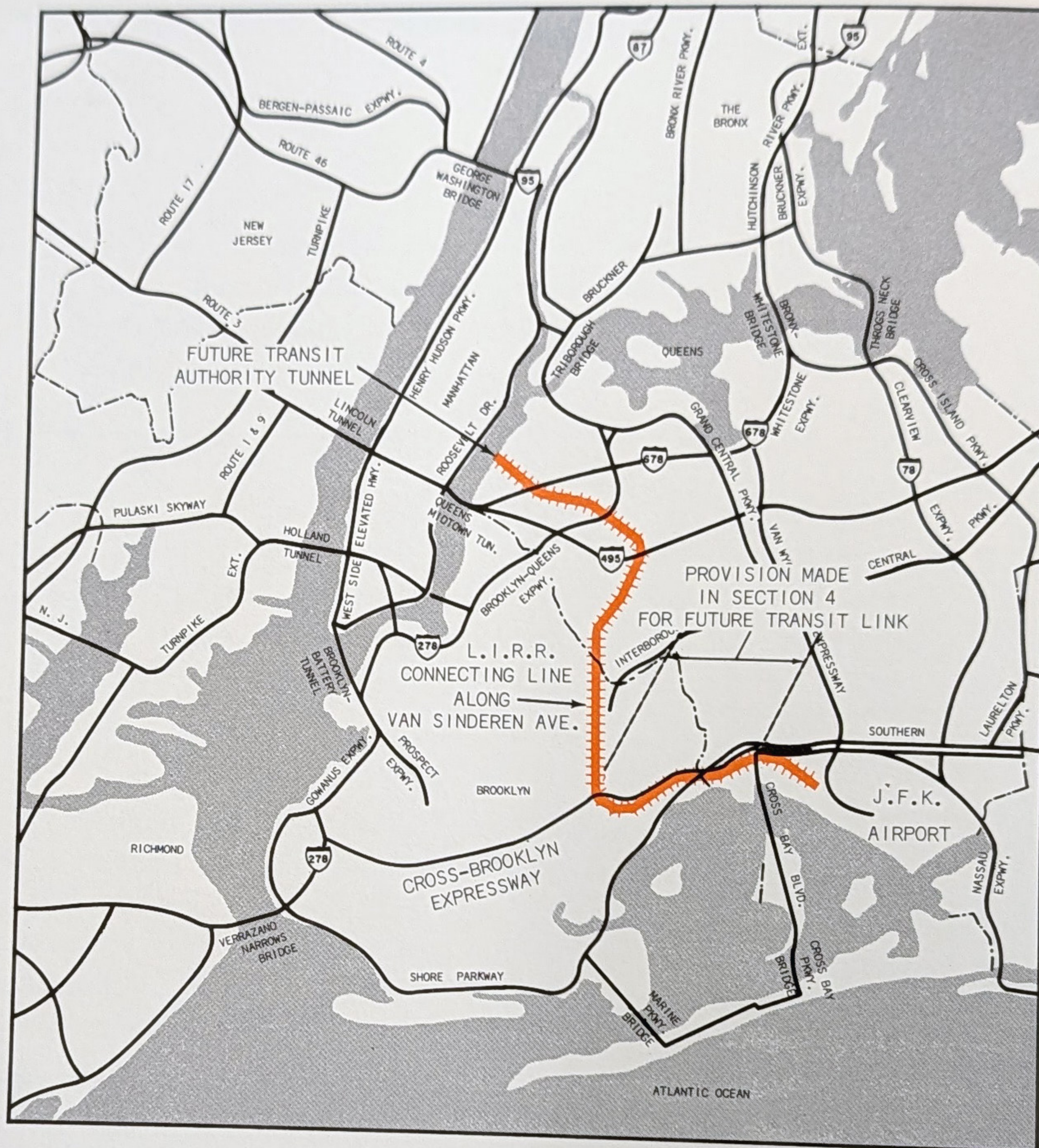
As the Expressway approaches the Shore Parkway it becomes a viaduct section to cross over the Parkway and connect with it. The Expressway then proceeds to interchange with the Nassau Expressway. This interchange, while not affecting right-of-way requirements, should be investigated in depth for the most feasible design.

The number of family units dislocated within this section seems to be at a minimum and is located where the Expressway route runs diagonally across a few streets in the vicinity of Van Sinderen Avenue.

The alignment of Section 4 of the Cross-Brooklyn Expressway could possibly become part of a route for an express rapid-transit link from John F. Kennedy Airport to Manhattan.

The possible route of the contemplated link would be from John F. Kennedy Airport along Section 4 of the Cross-Brooklyn Expressway to the rarely used Long Island connecting line at Van Sinderen Avenue along existing tracks in Queens to the future Transit Authority tunnel into Manhattan in the vicinity of East 63rd Street.

With this rapid-transit link possibility, the cross section of the Expressway should be modified to provide for the possible future construction. A widening of the median strip to about 40 feet within the walled expressway and the low-embankment sections would provide for this possibility at a minimal change in right-of-way requirements.



The transit link tracks could connect with the Expressway right-of-way by crossing over the west-bound lane at Van Sinderen Avenue and descending onto the enlarged median. From there to the Shore Parkway the transit tracks could be placed in the median without the high costs usually associated with normal subway construction.

After crossing Cross Bay Boulevard, where the Expressway comes down to street level, the transit tracks could continue over Cohancy Street and the Rockaway IND Division and then turn right to come down into the John F. Kennedy Airport parking field.

This transit connection could also incorporate provisions for serving southeast Queens. It is recommended that the feasibility of this transit route be studied in depth by the New York City Transit Authority.

